

# Pengenalan Bahasa Pemrograman Python

The background features a large blue circle on the right, a smaller yellow circle overlapping its left side, and a grey circle partially visible on the far right. Two thin white lines cross diagonally from the bottom left towards the top right, passing through the yellow and blue circles.



# Apa yang akan dipelajari?

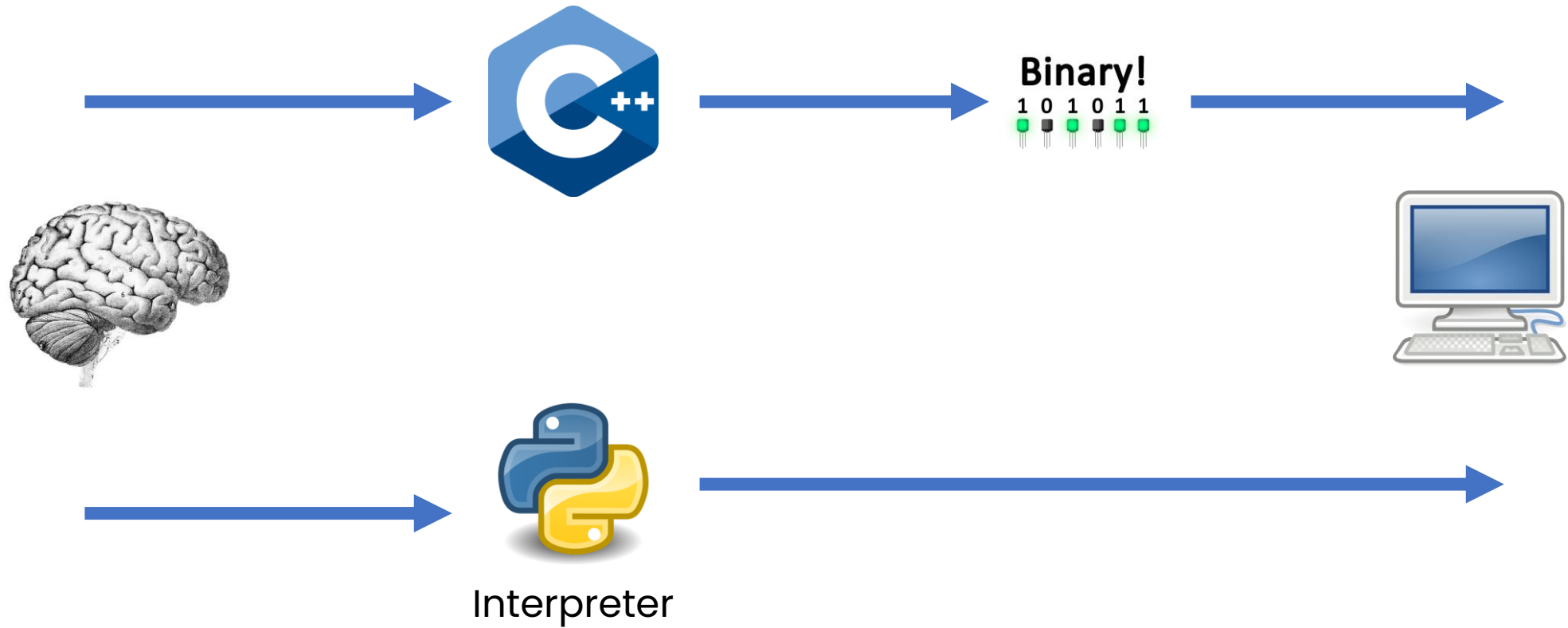
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- Sejarah Python
- Penggunaan Python
- Pros and Cons penggunaan Python
- *Library* Python
- *Tools* yang digunakan





# Programming





# ***Fact's of Python***

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- Sebuah bahasa interpreter, object-oriented dan high-level
- General purposes programming
- Diciptakan oleh **GUIDO VAN ROSSUM**
- Nama Python terinspirasi oleh komedi televisi BBC **Monty Python's Flying Circus**



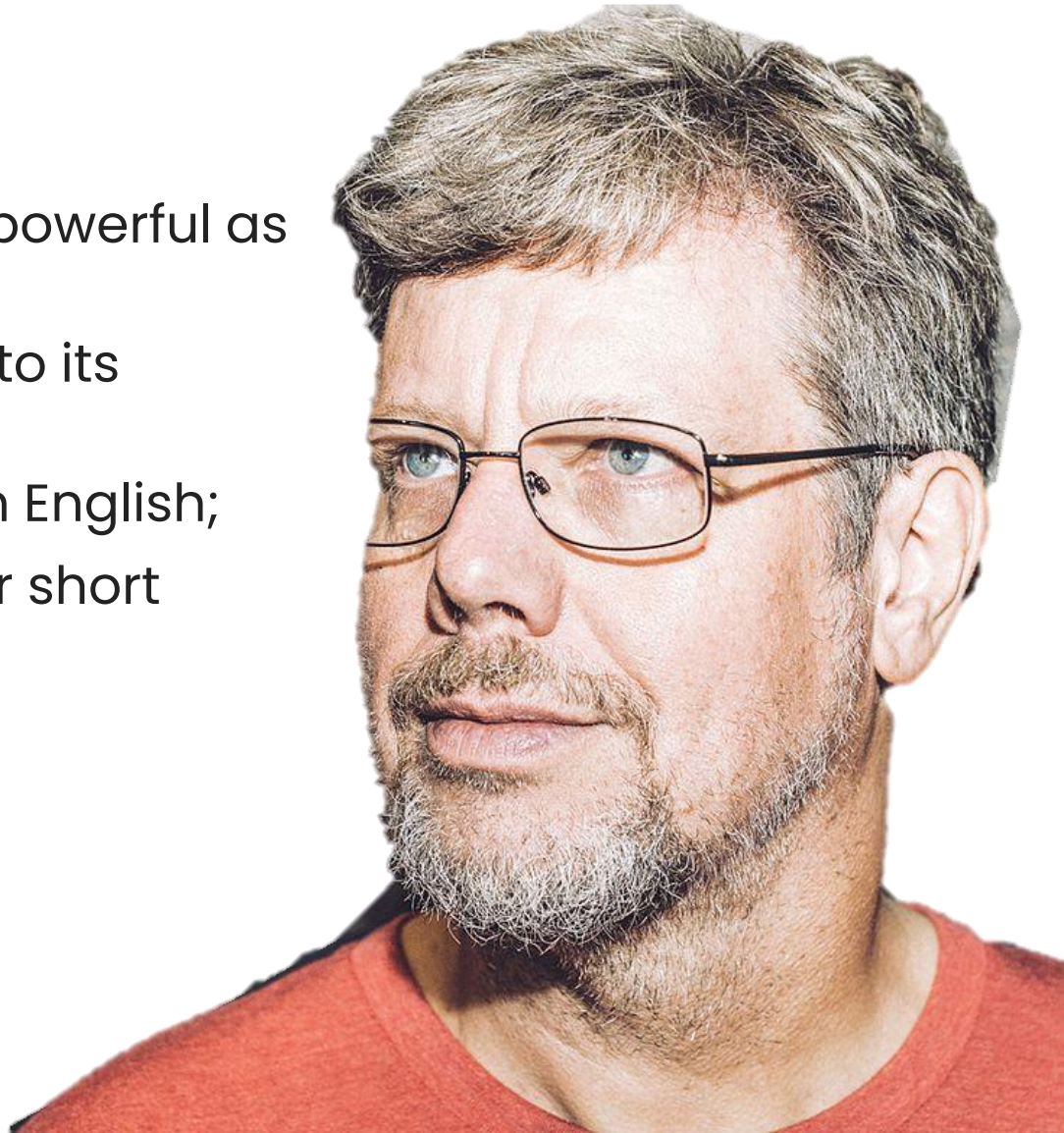




# Python Goals

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- an **easy and intuitive** language just as powerful as those of the major competitors;
- **open source**, so anyone can contribute to its development;
- code that is as **understandable** as plain English;
- **suitable for everyday tasks**, allowing for short development times.





# Top Programming Language

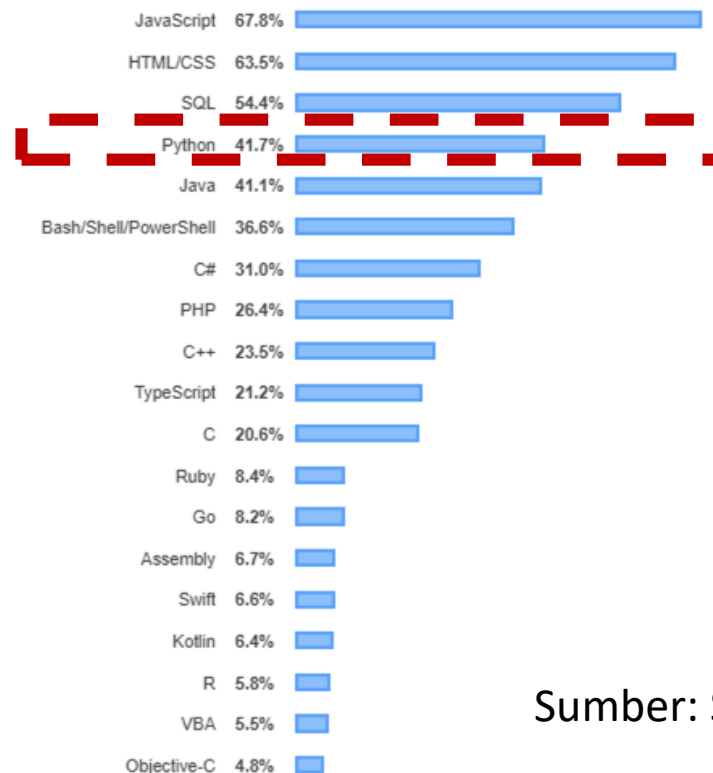


## Most Popular Technologies

### Programming, Scripting, and Markup Languages

All Respondents

Professional Developers

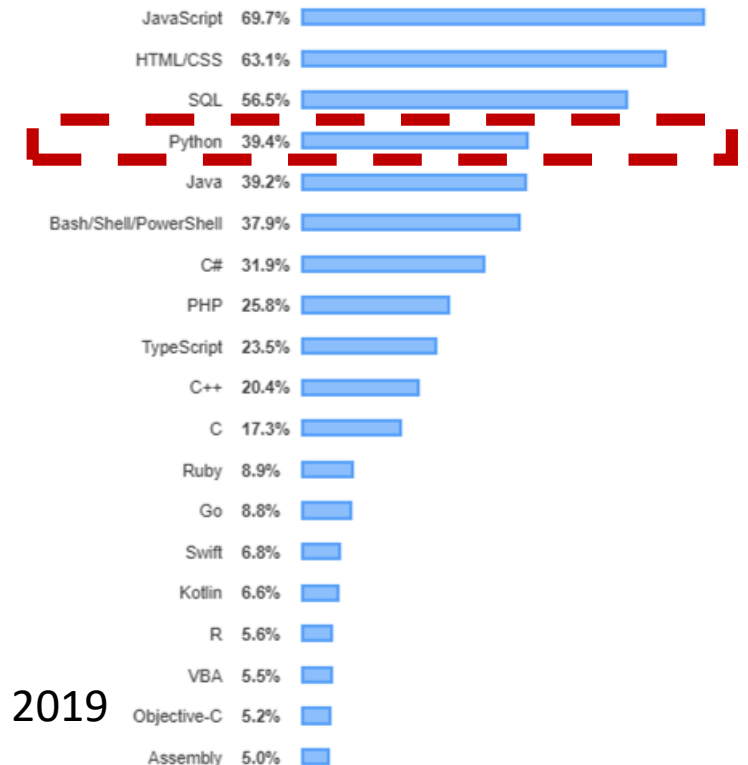


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Sumber: Stackoverflow Survey 2019





# Penggunaan Python



Web Development



Scientific and Numeric



Software Development





# Keunggulan dan Kekurangan

- **Mudah dipelajari**
- **Mendukung berbagai sistem dan platform**
- **Memudahkan pengembangan dengan sedikit koding**
- **Memudahkan deployment berbagai skala aplikasi**
- **Memiliki library yang besar untuk berbagai keperluan**







# Keunggulan dan Kekurangan

- **Lambat**
- **Kurang baik untuk pengembangan aplikasi mobile**
- **Bukan pilihan baik untuk kegiatan yang memerlukan memory intensive**
- **Hampir mustahil untuk membangun high-graphic 3D games**
- **Keterbatasan akses pada database**
- **Bukan bahasa yang baik untuk pekerjaan multi-processor/multi-core**





# Google Colab

- **Cloud service untuk mengakses jupyter notebook**
- **Digunakan untuk membuat dokumentasi data science**
- **Secara default, kita akan memperoleh resource:**
  - **13 GB RAM**
  - **130 GB Disk**

colab





# Apa yang perlu dipersiapkan?

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# Tahapan akses

- Kunjungi [colab.research.google.com/](https://colab.research.google.com/)
- Login ke akun gmail
- Untuk mulai membuat notebook, klik **New Notebook**

The screenshot shows the Google Colab interface with the 'Recent' tab selected. The interface includes a top navigation bar with 'Examples', 'Recent', 'Google Drive', 'GitHub', and 'Upload'. Below the navigation bar is a 'Filter notebooks' search bar. The main content area displays a table of recent notebooks. The table has columns for 'Title', 'First opened', 'Last opened', and a set of icons for each notebook. The notebook 'basic\_python.ipynb' is highlighted.

Title	First opened	Last opened	Icons
Welcome To Colaboratory	Feb 15, 2020	0 minutes ago	[Share icon]
pandas_basic.ipynb	Aug 5, 2020	7 minutes ago	[Share icon] [Copy icon]
<u>basic_python.ipynb</u>	10 days ago	4 days ago	[Share icon] [Copy icon]
numpy_basic.ipynb	Aug 6, 2020	4 days ago	[Share icon] [Copy icon]
predictive_model.ipynb	12 days ago	4 days ago	[Share icon] [Copy icon]

NEW NOTEBOOK CANCEL





# Komponen Notebook

Judul Notebook

Informasi Sesi

Markdown

Output

Code Chunk



The screenshot displays a Jupyter Notebook interface. At the top, the title bar shows the file name 'pandas\_basic.ipynb' and a star icon. Below the title bar is a menu bar with options: File, Edit, View, Insert, Runtime, Tools, and Help. The main content area is divided into sections. The first section is a markdown cell containing the text 'Untuk cara instalasi modul pandas, jalankan perintah berikut:'. The second section is a code cell containing the commands '!pip3 install pandas' and '!pip3 install numpy'. The output of the code cell is displayed below the code, showing the installation status of pandas and its dependencies. The third section is another markdown cell containing the text 'Untuk memuat modulnya jalankan sintaks berikut:'. The fourth section is a code cell containing the import statements 'import pandas as pd' and 'import numpy as np'. The right sidebar contains icons for Comment, Share, and a user profile, as well as RAM and Disk usage indicators.

pandas\_basic.ipynb ☆

File Edit View Insert Runtime Tools Help Last edited on August 7

+ Code + Text

7: Export Data

<> Untuk cara instalasi modul pandas, jalankan perintah berikut:

```
[ ] !pip3 install pandas
    !pip3 install numpy
```

Requirement already satisfied: pandas in /usr/local/lib/python3.6/dist-packages (1.0.5)  
Requirement already satisfied: numpy>=1.13.3 in /usr/local/lib/python3.6/dist-packages (from pandas) (1.18.5)  
Requirement already satisfied: python-dateutil>=2.6.1 in /usr/local/lib/python3.6/dist-packages (from pandas) (2.8.1)  
Requirement already satisfied: pytz>=2017.2 in /usr/local/lib/python3.6/dist-packages (from pandas) (2018.9)  
Requirement already satisfied: six>=1.5 in /usr/local/lib/python3.6/dist-packages (from python-dateutil>=2.6.1->pandas) (1.15.0)  
Requirement already satisfied: numpy in /usr/local/lib/python3.6/dist-packages (1.18.5)

Untuk memuat modulnya jalankan sintaks berikut:

```
[ ] import pandas as pd
    import numpy as np
```

Comment Share Settings User Profile

RAM Disk Editing





# Let's Code!



 pandas\_basic.ipynb ☆

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Comment Share Settings User

+ Code + Text

RAM Disk Editing

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Untuk memuat modulnya jalankan sintaks berikut:

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```



# What's Next?

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## Python for Data Analysis

PENGENALAN BAHASA PEMROGRAMAN PYTHON

Why Python for Data Analysis?  
How to choose the right package?  
What is the foundational package for scientific computing in Python?  
How to make working with structured data fast, easy and expressive?

